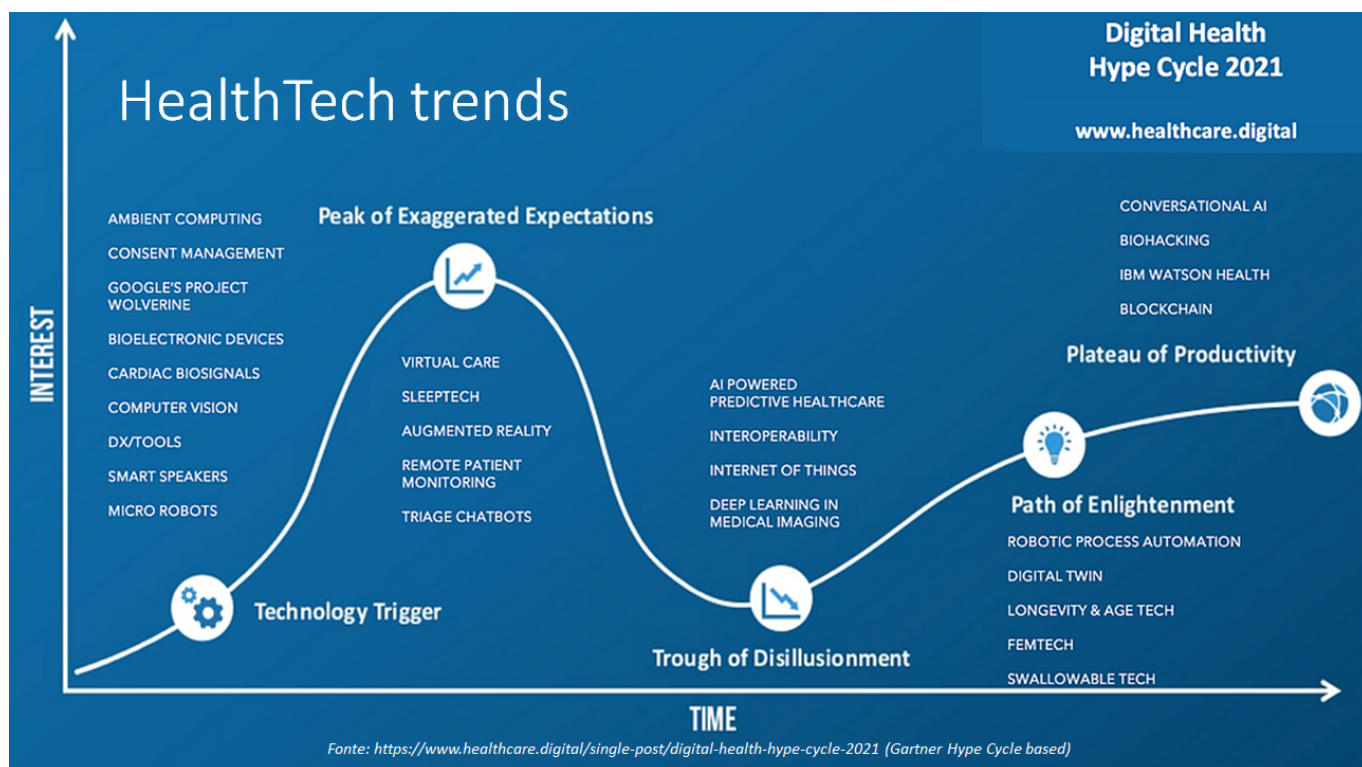Article

[Yuri Marx](#) · Jun 24, 2021   1m read

HealthTech Trends

The healthcare technology market is in strong evolution. Gartner's wave chart for healthcare technologies demonstrates what these technologies are, very well reflected by healthcare.digital. I call this HealthTech See:

These technologies can use InterSystems technologies (ISC Health Tech), see:

HealthTech Triggers

Ambient Computing

Apps that incorporate things like artificial intelligence, machine learning and cognitive processing. Ambient computing creates an environment in the digital world where companies can integrate technology seamlessly into everything we do, increasing usability and reducing the demand for human attention
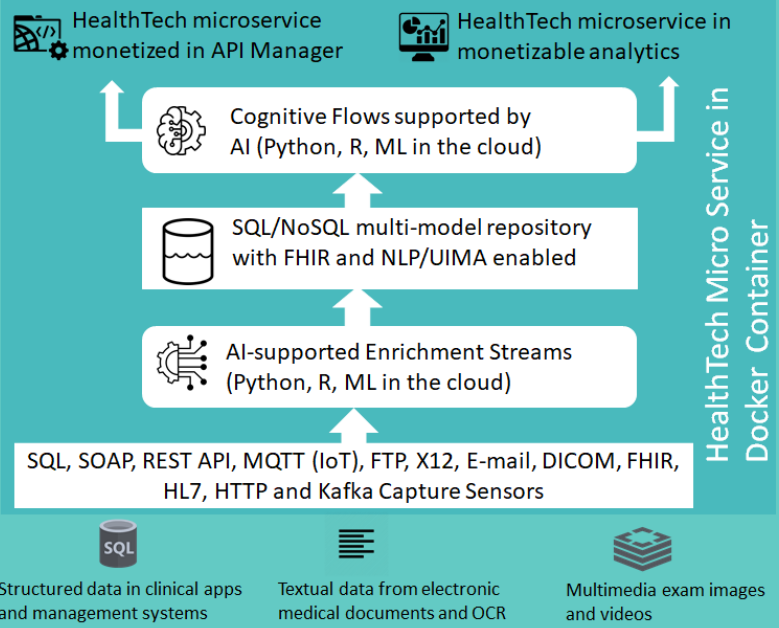
Computer Vision

An interdisciplinary scientific field that deals with how computers can gain high-level understanding from digital images or videos.

DX Tools (Diagnosis Tools)

These are diagnostic aid tools that use AI, sequencing technologies, and other techniques to obtain more accurate results.

HealthTech Architecture

HealthTech microservice monetized in API Manager

HealthTech microservice in monetizable analytics

Cognitive Flows supported by AI (Python, R, ML in the cloud)

SQL/NoSQL multi-model repository with FHIR and NLP/UIMA enabled

AI-supported Enrichment Streams (Python, R, ML in the cloud)

SQL, SOAP, REST API, MQTT (IoT), FTP, X12, E-mail, DICOM, FHIR, HL7, HTTP and Kafka Capture Sensors

HealthTech Micro Service in Docker Container

Structured data in clinical apps and management systems

Textual data from electronic medical documents and OCR

Multimedia exam images and videos

HealthTech Triggers

Bioelectronic Devices

Bioelectronics is used to improve the lives of people with disabilities and illnesses. For example, the glucose monitor that allows diabetic patients to measure their blood sugar levels

Cardiac Bio Signals

They are records of a biological event, such as a heart activity. The electrical, chemical and mechanical activity during these biological events produces signals that can be measured and analyzed
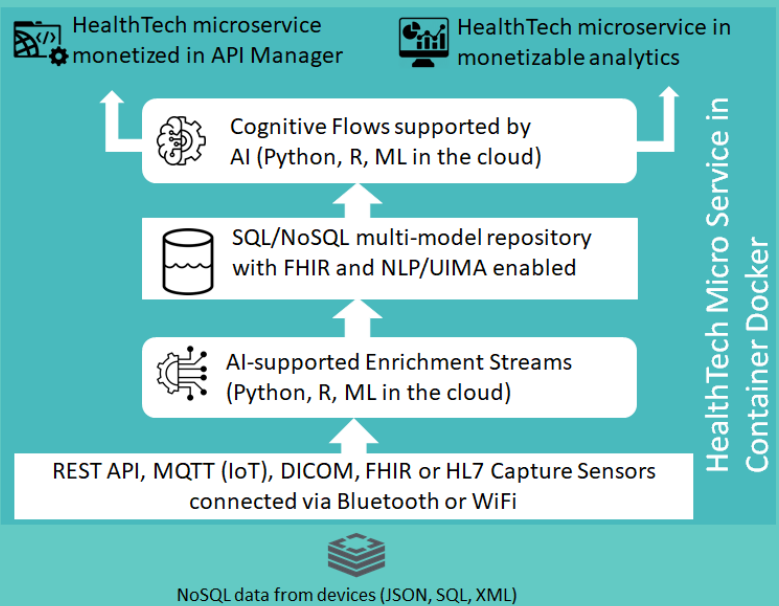
Smart Speakers

Cognitive voice assistants like Alexa or Google Home can monitor patients in their homes or even at the hospital.
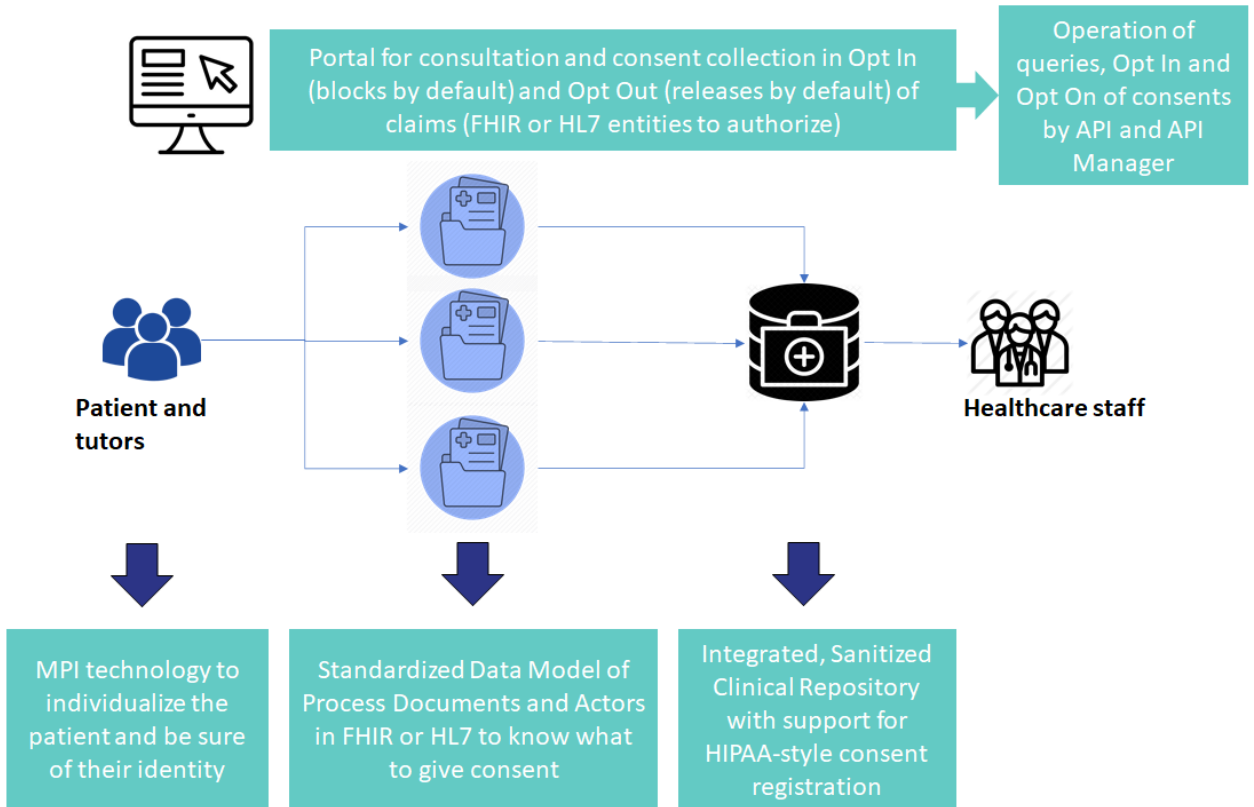
Micro Robots

Medical micro robots must function in the human body. They exhibit characteristics of size, function and choice of microscale material to carry medication

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REST API, MQTT (IoT), DICOM, FHIR or HL7 Capture Sensors connected via Bluetooth or WiFi

HealthTech Micro Service in Container Docker

NoSQL data from devices (JSON, SQL, XML)

Consent Management uses InterSystems Healthshare Stack to do MPI and consent management, see:

Consent Management Platform

Portal for consultation and consent collection in Opt In (blocks by default) and Opt Out (releases by default) of claims (FHIR or HL7 entities to authorize)

Operation of queries, Opt In and Opt On of consents by API and API Manager

Patient and tutors

Healthcare staff

MPI technology to individualize the patient and be sure of their identity

Standardized Data Model of Process Documents and Actors in FHIR or HL7 to know what to give consent

Integrated, Sanitized Clinical Repository with support for HIPAA-style consent registration

Exaggerated expectations

Virtual Care and Remote Monitoring

It is the remote data collection and remote monitoring of patients with a virtual indication for treatment, very important for poor regions or those lacking in certain specialties

Sleep Tech

Called polysomnographic technology is the widespread use of applications and devices that purport to measure and even improve sleep
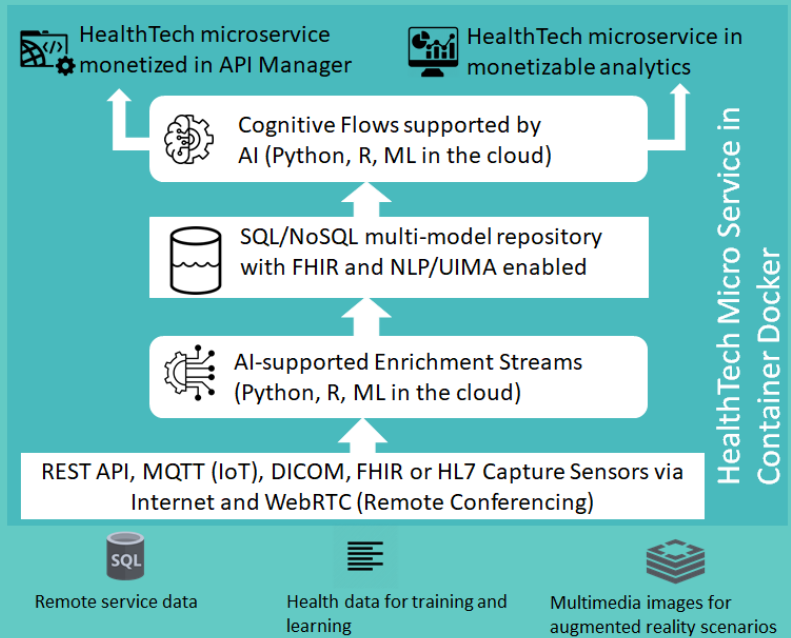
Augmented Reality

Used in healthcare facilities around the world today, for applications including vein visualization, surgical visualization and education

Triage Chat bot

Software with machine learning algorithms, natural language processing (NLP) to maintain a conversation with a user and provide real-time assistance to patients

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REST API, MQTT (IoT), DICOM, FHIR or HL7 Capture Sensors via Internet and WebRTC (Remote Conferencing)

HealthTech Micro Service in Container Docker

Remote service data

Health data for training and learning

Multimedia images for augmented reality scenarios

Enlightenment

Robotic Process Automation

RPA is a digital worker. It automates work processes, performing the same computer tasks as a human being would.

Digital Twin

Known as a digital twin, it is a digital replica of a product, service or process. Provides personalized data-based medicine.

Longevity, Age Tech

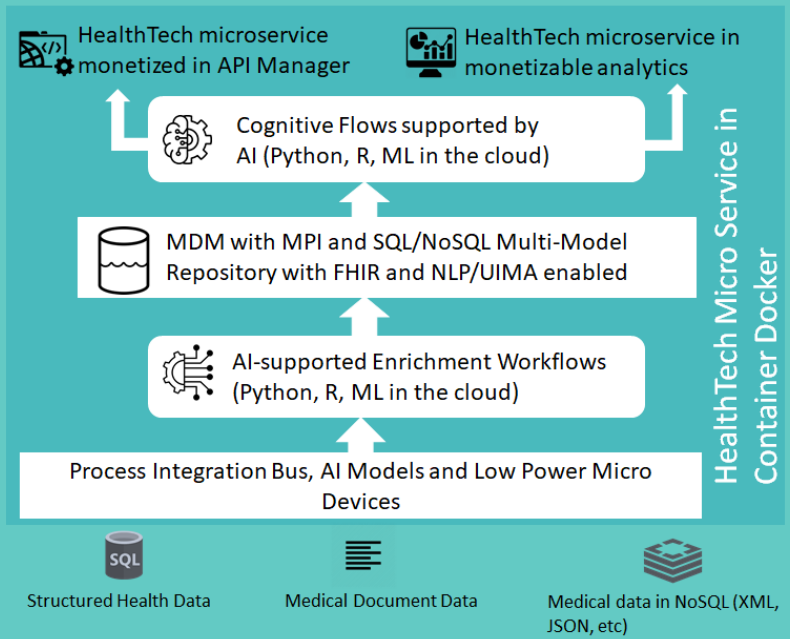Processes that operate at the cellular level to delay aging

Fem Tech

Software, diagnostics, products and services that use technology focused on women's health

Swallowable Tech

Ingestible sensors housed in tablets designed for patients to adhere to prescribed medications. The sensors are energized by the patient's bowel that swallows them.

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MDM with MPI and SQL/NoSQL Multi-Model Repository with FHIR and NLP/UIMA enabled

AI-supported Enrichment Workflows (Python, R, ML in the cloud)

Process Integration Bus, AI Models and Low Power Micro Devices

HealthTech Micro Service in Container Docker

Structured Health Data

Medical Document Data

Medical data in NoSQL (XML, JSON, etc)

Plateau

Conversational AI

AI conversacional se refere ao uso de aplicativos de mensagens, assistentes baseados na fala e chatbots para automatizar a comunicação e criar experiências personalizadas do cliente em escala

BioHacking

Biohacking is a practice that can lead to big changes in our lives. You could call it citizen biology or do it yourself. It takes place in small laboratories, mostly non-university - where all kinds of people come together to explore biology.
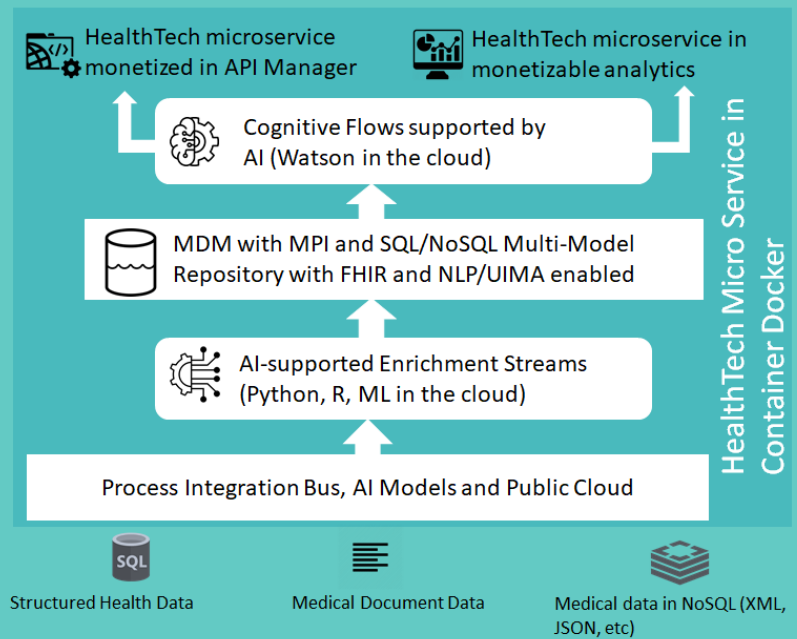
IBM Watson Health

IBM Watson Health solutions are designed to enhance the human experience and improve clinical and operational workflows

Blockchain in Healthcare

Show promise for solving problems such as the use of EHR data distribution and interoperability across the country

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AI-supported Enrichment Streams (Python, R, ML in the cloud)

Process Integration Bus, AI Models and Public Cloud

HealthTech Micro Service in Container Docker

Structured Health Data

Medical Document Data

Medical data in NoSQL (XML, JSON, etc)

IRIS and Health Tech

Database

- SQL with ORM for ObjectScript
- NoSQL to JSON – Doc
- DBAnalytics with MDX cubes
- Shard Support
- Corporate Cache – ECP
- RBAC, Encryption and Labeling
- Transanalytic and Data Lake
- JDBC, ODBC or Native Access

Classic Analytics

- BI/Analytics
- ETL (BPL/DTL)
- Panels, Analysis and Hierarchical Pivots
- SQL Access, MDX and Power BI Connectors
- Built-in Reports and Reports
- UIMA - Analysis of unstructured contente
- Semantic and sentiment analysis
- Real-time or scheduled analytics
- User Portal

Interoperability

- REST API and Management API
- Data Bus - SOA, EAI, ESB
- Integration and EDI Adapters
- Flow Automation - BPL and DTL, Rules
- Native Integration with Java, .NET, C, Python and JavaScript
- MFT - Managed File Transfer
- Messaging, Events and JMS
- IoT with MQTT/API

Advanced Analytics

- AutoML – IntegratedML
- AutoML H2O, Data
- Robot or InterSystems
- IA/ML with R or Python
- NLP - Natural Language Processing
- Statistics in R, Python and ObjectScript
- Data Bus and Cognitive Flows
- Text Analytics
- PMML
- Adaptive Operational Analytics (AtScale)

DevOps | On-premises or in the public cloud | Any Language

#InterSystems Business Solutions and Architectures #InterSystems IRIS for Health

Source URL:https://community.intersystems.com/post/healthtech-trends